

Drawings

Applicants have enclosed a red-lined copy of FIG. 7 showing the amendment made to the figure, and have also enclosed clean-copy replacement sheet that incorporates the change noted in the red-lined figure.

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed December 21, 2004. Reconsideration and allowance of the application and pending claims 1-28 are respectfully requested.

I. Allowed and Allowable Subject Matter

Applicants appreciate the Examiner's indication that claims 25-28 are allowed and that claims 11-12, 23-24 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In that it is believed that every rejection has been overcome, it is respectfully submitted that each of the claims that remains in the case is presently in condition for allowance.

II. Drawing Amendments

Applicants have amended FIG. 7 to correct a typographical error. In particular, the reference number "500" is in error, particularly since 500 already exists as a reference number corresponding to the LO signal, as shown in FIG. 5 and described on page 6, line 25. Applicants have amended FIG. 7 to replace "500" with "600." A clean copy of FIG. 7 and a marked-up copy of FIG. 7 that shows the change in red ink have been included with this response. It is respectfully asserted that no new matter has been added.

III. Specification Amendments

Applicants have amended a typographical error in the specification on page 8, line 16. In particular, the reference number “500” has been replaced with “600” on the specified line. It is respectfully asserted that no new matter has been added.

IV. Claim Rejections - 35 U.S.C. § 102(b)

A. Statement of the Rejection

Claims 1-7, 9, 10, and 13-22 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by *Havens, et al.* (“*Havens*,” U.S. Pat. No. 6,313,680B1). Applicants respectfully traverse this rejection.

B. Discussion of the Rejection

It is axiomatic that “[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration.” *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed invention must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(b). In the present case, not every feature of the claimed invention is represented in the *Havens* reference. Since *Havens* does not disclose all of the features of independent claims 1 and 13, Applicants believe the arguments presented to show the alleged anticipation of the dependent claims are rendered moot due to the incorporation of independent claim features into the dependent claims. Thus, Applicants omission of rebuttal arguments in response to the assertions made to

specific dependent claims is not intended to be an admission as to the merits of those arguments.

Independent Claim 1

As recited in independent claim 1, Applicants claim (with emphasis added):

1. A polyphase filter comprising
a first phase splitting filter that produces a first output,
a second phase splitting filter that produces a second output,
a first variable resistance connected across the first output, and
circuitry capable of detecting the phase of the outputs produced by the first and second outputs, and circuitry capable of adjusting the first variable resistance to produce a desired phase difference between the first output and the second output.

Applicants respectfully submit that *Havens* does not disclose the emphasized features. The Office Action alleges in part on Page 2, section 3 (1) the following:

With regard to claim 1, Havens et al. Discloses in Fig(s). 3, 4, a polyphase filter comprising a first phase splitting filter (302) that produces a first output (106), a second phase splitting filter (108), a first variable resistance (R1) connected across the output, and circuitry (402) capable of detecting the phase of the outputs produced by the first and second outputs...

Applicants respectfully disagree, and believe the application of *Havens* is improper because such application ignores the explicit language of independent claim 1. Independent claim 1 clearly describes a ***filter*** that produces an ***output***, and a ***variable resistance connected across the output***, which equates to at least two separate elements: a ***filter*** and a ***variable resistance***. *Havens* does not meet this claim language. In contrast to what is claimed, *Havens* appears to disclose a filter that includes a variable resistor. A more reasonable application of *Havens* in terms of the language of independent claim 1 would be “a first phase splitting filter (302) comprising a variable resistance,” or “a first phase splitting filter

(302), wherein the first phase splitting filter comprises a variable resistance.” Thus, Applicants respectfully submit that *Havens* does not disclose the emphasized claim features, and respectfully request that the rejection to independent claim 1 be withdrawn.

Because independent claim 1 is allowable over *Havens*, corresponding dependent claims 2-12 are allowable as a matter of law for at least the reason that dependent claims 2-12 contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Independent Claim 13

As recited in independent claim 13, Applicants claim (with emphasis added):

13. A polyphase filter, comprising
a first phase splitting filter that produces a first output;
a second phase splitting filter that produces a second output;
a first variable resistance connected across the first output; and
a detector that determines the phase of the first and second outputs, and
adjusts the first variable resistance to produce a desired phase difference
between the first output and the second output.

Applicants respectfully submit that *Havens* does not disclose the emphasized features, and believe *Havens* is being improperly applied. Independent claim 13 clearly describes a ***filter*** that produces an ***output***, and a ***variable resistance connected across the output***, which equates to at least two separate elements: a ***filter*** and a ***variable resistance***. *Havens* does not meet this claim language. In contrast to what is claimed, *Havens* appears to disclose a filter that includes a variable resistor. A more reasonable application of *Havens* in terms of the language of independent claim 13 would be “a first phase splitting filter (302) comprising a variable resistance,” or “a first phase splitting filter (302), wherein the first phase splitting filter comprises a variable resistance.” Thus, Applicants respectfully submit

that *Havens* does not disclose the emphasized claim features, and respectfully requests that the rejection to independent claim 13 be withdrawn.

Because independent claim 13 is allowable over *Havens*, corresponding dependent claims 14-24 are allowable as a matter of law.

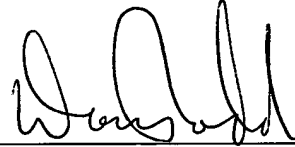
V. Claim Rejections - 35 U.S.C. § 102(b) and § 103(a)

Claim 8 has been rejected under 35 U.S.C. § 102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over *Havens*. Applicants respectfully traverse this rejection. Since claim 8 is dependent on independent claim 1 (and thus includes the features of claim 1), and because *Havens* does not disclose all of the features of independent claim 1, Applicants respectfully submit that claim 8 is allowable over *Havens*.

CONCLUSION

Applicants respectfully submits that Applicants' pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,



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